

EXHIBIT 1

1. RE-ANALYSIS OF KEYWORD LEXICAL CLUSTER OVERLAP USING LF 2010-2013

Item #	Keyword	Lexical Overlap BaseRate based on 10 Baseline Authors	Lexical Overlap BaseRate Standard Deviation	Positive 1 SD above baserate	Positive 2 SD above baserate	Highest Ranking Comparison Author(s)	Highest Overlap Rate for Keyword
1	accident*	11.85	6.14	17.99	24.14	Richelle Mead	20.73
				17.99		Tracy Wolff	20.53
2	Alaska	0.61	1.31	1.92	3.23	Tracy Wolff	38.63
3	alien	6.44	7.66	14.10	21.76	Tracy Wolff	24.44
4	aurora	0.00	0.00	0.00	0.00	Tracy Wolff	28.57
5	blood*	19.56	8.58	28.14	36.72	Tracy Wolff	51.89
6	book*	28.82	10.24	39.06	49.30	Kami Garcia	49.77
					49.30	Tracy Wolff	49.32
7	buck	3.20	4.83	8.03	12.85	Tracy Wolff	28.00
8	Diego	0.91	2.87	3.78	6.66	Tracy Wolff	77.27
9	doorway*	14.86	6.31	21.16	27.47	Tracy Wolff	26.33
10	dragon	1.93	3.28	5.21	8.48	Tracy Wolff	72.81
11	duck	14.34	8.77	23.11	31.87	Tracy Wolff	48.47
12	fang	4.54	6.23	10.76	16.99	Tracy Wolff	54.91
13	fist*	12.58	6.82	19.40	26.22	Tracy Wolff	49.09
14	grin*	16.37	7.27	23.64	30.92	Tracy Wolff	57.40
15	herbal	0.33	1.04	1.37	2.41	Tracy Wolff	6.59
16	jean*	17.73	5.37	23.09	28.46	Tracy Wolff	27.08
17	kiss*	17.98	5.20	23.18	28.38	Tracy Wolff	50.33
18	monster	10.09	8.50	18.59	27.09	Tracy Wolff	56.98
19	moon*	6.91	7.47	14.38	21.85	Kami Garcia	27.04
				14.38	21.85	Tracy Wolff	18.50
20	mutation	0.00	0.00	0.00	0.00	Tracy Wolff	18.52
21	northern	1.18	1.82	3.00	4.82	Tracy Wolff	18.18
22	protector	1.02	2.16	3.19	5.35	Tracy Wolff	14.46
23	queen	7.96	9.69	17.65	27.35	Tracy Wolff	60.21
24	selfish	10.61	9.15	19.75	28.90	Tracy Wolff	30.30
25	stab	7.75	3.95	11.70	15.65	Tracy Wolff	17.22
26	Stonehenge	1.20	3.79	4.99	8.79	Tracy Wolff	18.00
27	tea	6.12	6.08	12.20	18.27	Tracy Wolff	39.29
28	teacher*	13.86	5.32	19.18	24.51	Tracy Wolff	41.62
29	tree*	26.49	10.21	36.70	46.91	Tracy Wolff	52.17
30	vampire	9.64	11.74	21.38	33.12	Tracy Wolff	63.26

31	waggle	1.00	2.14	3.14	5.28	Tracy Wolff	23.16
32	werewolf	6.88	9.62	16.50	26.12	Tracy Wolff	39.58
33	wink*	7.43	5.27	12.70	17.97	Tracy Wolff	49.36
34	witch	6.74	7.99	14.73	22.72	Tracy Wolff	59.94
35	wolf	9.08	15.50	24.58	40.07	Maggie Stiefvater	48.97
					40.07	Tracy Wolff	41.96

STANDARD DEVIATION ANALYSIS

I colored light blue the important standard deviation for this analysis. If the highest lexical overlap rate is between the first and second standard deviation, I colored blue the first standard deviation. If the highest lexical overlap rate is very close or exceeds the second standard deviation, I colored blue the second standard deviation. I colored Tracy Wolff's rows in relation to standard deviation as the question is how significant Tracy Wolff's lexical overlap rate is.

In 31 of 35 keywords, Tracy Wolff's overlap rate with LF is at least two (2) standard deviations above the baseline rate of the ten (10) baseline authors. For these 31 keywords, the TW overlap rate is highly statistically significant.

In 4 of 35 keywords, Tracy Wolff's overlap rate with LF is between the first and second standard deviations above the baseline rate of the ten (10) baseline authors. For these 4 keywords, the TW overlap rate is statistically significant, given the nearness of the TW overlap rate to the second standard deviation.

The Standard Deviation analysis using only LF 2010-2013 aligns with the original analysis.

BINOMIAL PROBABILITY USING HIGHEST RANKING AUTHOR

I colored yellow the name of the author who has the highest ranking lexical overlap rate, where the highest ranking lexical overlap rate exceeds the lower ranking rates. If there is a tie or rates are very close, I colored both the highest ranking and the next highest ranking authors in orange.

In 31 of 35 keywords, Tracy Wolff has the highest overlap rate with LF (compared to the baseline authors). The binomial probability for 31 out of 35 is 0.0000015, or extremely unlikely to happen merely by chance.

In 34 of 35 keywords, Tracy Wolff has the highest overlap rate with LF, including three ties with a baseline author. The binomial probability for 34 out of 35 is 0.000000000029, or extremely, extremely unlikely to happen merely by chance.

Of the 35 keywords, two —*aurora* and *mutation*—are not used by the baseline authors. We can remove them, for benefit of the doubt. If we do, we have 33 keywords. In 29 of 33 keywords (removing two that do not occur in the baseline authors' novels), Tracy Wolff has the highest

overlap rate with LF. The binomial probability for 29 out of 33 is 0.000005, or extremely unlikely to happen merely by chance.

Of the 35 keywords, twelve (12) are used by all of the baseline authors (*accident, blood, book, doorway, fist, grin, jean, kiss, moon, teacher, tree, wink*). These keywords are starred in the table above. We can test only these twelve keywords. In 11 of 12 keywords that are used by all the baseline authors, Tracy Wolff has the highest overlap rate with LF or tied overlap rate with LF. The binomial probability for 11 out of 12 is 0.003, or unlikely to happen merely by chance.

The Binomial Probability analysis using only LF 2010-2013 aligns with the original analysis.

DOCUMENT VECTOR WITH COSINE SIMILARITY

For each of the 35 keywords, not one of the LF*BaselineAuthor vector measurement is similar to the LF*TracyWolff vector measurement. **For each LF*BaselineAuthor, the cosine similarity score is close to zero or negative, demonstrating difference from the LF*TracyWolff overlaps.**

2. RE-ANALYSIS OF KEYWORD LEXICAL CLUSTER OVERLAP USING ONLY LF 2014

The keyword *Diego* does not occur in LF 2014. We therefore have 34 keywords in this analysis. (That is, we cannot calculate overlaps with LF on the word *Diego* because there are no lexical clusters in LF 2014 for the word.)

Item #	Keyword	Lexical Overlap BaseRate based on 10 Baseline Authors	Lexical Overlap BaseRate Standard Deviation	Positive 1 SD above baserate	Positive 2 SD above baserate	Highest Ranking Comparison Author(s)	Highest Overlap Rate for Keyword
1	accident*	14.19	6.39	20.58	26.97	Richelle Mead	25.15
				20.58		Tracy Wolff	23.35
2	Alaska	0.89	1.92	2.81	4.73	Tracy Wolff	46.60
3	alien	4.35	4.58	8.93	13.51	Tracy Wolff	13.04
4	aurora	0.00	0.00	0.00	0.00	Tracy Wolff	52.17
5	blood*	27.78	10.53	38.31	48.85	Tracy Wolff	61.34
6	book*	35.18	10.34	45.52	55.85	Kami Garcia	55.79
					55.85	Tracy Wolff	55.49
7	buck	6.40	7.59	13.99	21.58	Tracy Wolff	28.00
8	doorway*	18.15	7.34	25.48	32.82	Tracy Wolff	31.48
9	dragon	2.24	3.82	6.06	9.87	Tracy Wolff	79.31
10	duck	21.06	11.87	32.93	44.80	Tracy Wolff	53.98

11	fang	7.25	9.68	16.93	26.61	Tracy Wolff	75.00
12	fist*	14.18	7.92	22.10	30.02	Tracy Wolff	52.85
13	grin*	24.83	9.28	34.11	43.40	Tracy Wolff	68.34
14	herbal	0.47	1.47	1.94	3.41	Tracy Wolff	4.65
15	jean*	23.95	7.01	30.97	37.98	Kami Garcia	34.50
				30.97	37.98	Becca Fitzpatrick	33.33
				30.97		Tracy Wolff	32.17
16	kiss*	24.91	5.93	30.84	36.77	Tracy Wolff	56.96
17	monster	12.84	10.75	23.58	34.33	Tracy Wolff	64.95
18	moon*	9.45	9.43	18.88	28.31	Kami Garcia	34.45
				18.88	28.31	Tracy Wolff	25.19
19	mutation	0.00	0.00	0.00	0.00	Tracy Wolff	22.22
20	northern	0.96	1.50	2.46	3.96	Tracy Wolff	19.13
21	protector	1.06	2.30	3.36	5.66	Tracy Wolff	31.91
22	queen	9.75	10.66	20.41	31.07	Tracy Wolff	66.67
23	selfish	14.17	11.15	25.31	36.46	Tracy Wolff	37.50
24	stab	10.63	5.68	16.31	21.99	Tracy Wolff	23.62
25	Stonehenge	1.43	4.52	5.95	10.46	Tracy Wolff	23.81
26	tea	11.01	10.50	21.51	32.01	Tracy Wolff	48.43
27	teacher*	17.52	4.79	22.31	27.10	Tracy Wolff	46.15
28	tree*	31.66	11.33	42.99	54.33	Tracy Wolff	59.38
29	vampire	18.43	21.07	39.49	60.56	Tracy Wolff	70.37
30	waggle	2.05	4.35	6.39	10.74	Tracy Wolff	29.55
31	werewolf	12.38	15.63	28.01	43.63	Tracy Wolff	47.62
32	wink*	10.35	6.73	17.08	23.82	Tracy Wolff	52.02
33	witch	6.45	7.66	14.11	21.78	Tracy Wolff	59.16
34	wolf	13.69	20.28	33.97	54.25	Maggie Stiefvater	62.41
					54.25	Tracy Wolff	56.95

STANDARD DEVIATION ANALYSIS

I colorized light blue the important standard deviation for this analysis. If the highest lexical overlap rate is between the first and second standard deviation, I colorized blue the first standard deviation. If the highest lexical overlap rate is very close or exceeds the second standard deviation, I colorized blue the second standard deviation. I colorized Tracy Wolff's rows in relation to standard deviation as the question is how significant Tracy Wolff's lexical overlap rate is.

In 31 of 34 keywords, Tracy Wolff's overlap rate with LF is at least two (2) standard deviations above the baseline rate of the ten (10) baseline authors. For these 31 keywords, the TW overlap rate is highly statistically significant.

In 3 of 34 keywords, Tracy Wolff's overlap rate with LF is between the first and second standard deviations above the baseline rate of the ten (10) baseline authors. For these 3 keywords, the TW overlap rate is statistically significant, given the nearness of the TW overlap rate to the second standard deviation.

The Statistical Deviation analysis using only LF 2014 aligns with the original analysis.

BINOMIAL PROBABILITY USING HIGHEST RANKING AUTHOR

I colorized yellow the name of the author who has the highest ranking lexical overlap rate, where the highest ranking lexical overlap rate exceeds the lower ranking rates. If there is a tie or rates are very close, I colorized both the highest ranking and the next highest ranking authors in orange.

In 29 of 34 keywords, Tracy Wolff has the highest overlap rate with LF (compared to the baseline authors). The binomial probability for 29 out of 34 is 0.000016, or extremely unlikely to happen merely by chance.

In 32 of 34 keywords, Tracy Wolff has the highest overlap rate with LF, including three ties with a baseline author (*accident, book, jean* but not including *moon, wolf*). The binomial probability for 32 out of 34 is 0.000000033, or extremely, extremely unlikely to happen merely by chance.

Of the 34 keywords, two (*aurora, mutation*) are not used by the baseline authors but are used by Freeman and Wolff. We can remove them, for benefit of the doubt. If we do, we have 32 keywords. In 29 of 32 keywords (removing two that do not occur in the baseline authors' novels), Tracy Wolff has the highest overlap rate with LF. The binomial probability for 29 out of 32 is 0.0000012, or extremely unlikely to happen merely by chance.

Of the 34 keywords, twelve (12) are used by all of the baseline authors (*accident, blood, book, doorway, fist, grin, jean, kiss, moon, teacher, tree, wink*). These keywords are starred in the table above. We can test only these twelve keywords. In 10 of 12 keywords that are used by all the baseline authors, Tracy Wolff has the highest overlap rate with LF. The binomial probability for 10 out of 12 is 0.02, or unlikely to happen merely by chance.

The Binomial Probability analysis using only LF 2014 aligns with the original analysis.

DOCUMENT VECTOR WITH COSINE SIMILARITY

For each of the 34 keywords, not one of the LF*BaselineAuthor vector measurement is similar to the LF*TracyWolff vector measurement. **For each LF*BaselineAuthor, the cosine similarity score is close to zero or negative, demonstrating difference from the LF*TracyWolff overlaps.**

3. RE-ANALYSIS OF KEYWORD LEXICAL CLUSTER OVERLAP USING ONLY LF 2016

Thirteen keywords (*aurora, Diego, dragon, fang, herbal, mutation, northern, protector, selfish, Stonehenge, tea, vampire, wolf*) do not occur in LF 2016. We therefore have 22 keywords in this analysis. (That is, we cannot calculate overlaps with LF on the words listed because there are no lexical clusters in LF 2016 for the word.)

Item #	Keyword	Lexical Overlap BaseRate based on 10 Baseline Authors	Lexical Overlap BaseRate Standard Deviation	Positive 1 SD above baserate	Positive 2 SD above baserate	Highest Ranking Comparison Author(s)	Highest Overlap Rate for Keyword
1	accident*	21.55	8.30	29.85	38.15	Tracy Wolff	39.66
2	Alaska	1.36	3.00	4.36	7.36	Tracy Wolff	57.07
3	alien	4.06	5.24	9.31	14.55	Tracy Wolff	17.19
4	blood*	36.47	12.23	48.70	60.93	Tracy Wolff	67.45
5	book*	41.94	8.96	50.90	59.86	Kami Garcia	58.06
				50.90		Tracy Wolff	55.65
6	buck	6.80	8.65	15.45	24.10	Tracy Wolff	32.00
7	doorway*	22.62	7.12	29.74	36.86	Tracy Wolff	30.95
8	duck	17.38	11.06	28.44	39.50	Tracy Wolff	40.48
9	fist*	28.00	12.35	40.35	52.70	Tracy Wolff	55.00
10	grin*	35.38	10.63	46.02	56.65	Tracy Wolff	73.85
11	jean*	27.98	8.04	36.02	44.06	Becca Fitzpatrick	39.39
				36.02	44.06	Kami Garcia	36.36
				36.02	44.06	Tracy Wolff	35.35
12	kiss*	37.90	7.08	44.99	52.07	Tracy Wolff	66.43
13	monster	21.35	14.04	35.39	49.43	Tracy Wolff	64.86
14	moon*	12.26	10.03	22.30	32.33	Kami Garcia	37.74
				22.30		Tracy Wolff	28.30
15	queen	7.91	8.07	22.30	24.05	Tracy Wolff	48.84
16	stab	12.86	6.51	19.37	25.88	Lauren Kate	23.21
				19.37	25.88	Stephanie Meyer	19.64
				19.37	25.88	Tracy Wolff	16.07
17	teacher*	19.13	6.09	25.22	31.31	Tracy Wolff	44.23
18	tree*	37.74	12.02	49.77	61.79	Tracy Wolff	59.40
19	waggle	1.59	3.40	4.99	8.38	Tracy Wolff	22.73
20	werewolf	17.92	21.43	39.35	60.78	Tracy Wolff	66.67
21	wink*	14.88	8.00	22.88	30.88	Tracy Wolff	60.00
22	witch	10.53	9.61	20.14	29.74	Tracy Wolff	47.37

STANDARD DEVIATION ANALYSIS

I colorized light blue the important standard deviation for this analysis. If the highest lexical overlap rate is between the first and second standard deviation, I colorized blue the first standard deviation. If the highest lexical overlap rate is very close or exceeds the second standard deviation, I colorized blue the second standard deviation. I colorized Tracy Wolff's rows in relation to standard deviation as the question is how significant Tracy Wolff's lexical overlap rate is. If there is no standard deviation colored blue, Tracy Wolff's lexical overlap rate is not significant statistically (this occurs twice with the keywords *jean* and *stab*).

In 17 of 22 keywords, Tracy Wolff's overlap rate with LF is at least two (2) standard deviations above the baseline rate of the ten (10) baseline authors. For these 17 keywords, the TW overlap rate is highly statistically significant.

In 3 of 22 keywords, Tracy Wolff's overlap rate with LF is between the first and second standard deviations above the baseline rate of the ten (10) baseline authors. For these 3 keywords, the TW overlap rate is statistically significant, given the nearness of the TW overlap rate to the second standard deviation; (a person might quibble on one of these three, so at the most conservation, 2 of the 22 keywords are statistically significant based on the nearness of the TW overlap rate to the second standard deviation).

The Statistical Deviation analysis using only LF 2016 aligns with the original analysis.

BINOMIAL PROBABILITY USING HIGHEST RANKING AUTHOR

I colorized yellow the name of the author who has the highest ranking lexical overlap rate, where the highest ranking lexical overlap rate exceeds the lower ranking rates. If there is a tie or rates are very close, I colorized both the highest ranking and the next highest ranking authors in orange.

In 18 of 22 keywords, Tracy Wolff has the highest overlap rate with LF (compared to the baseline authors). The binomial probability for 18 out of 22 is 0.002, or extremely unlikely to happen merely by chance.

In 19 of 22 keywords, Tracy Wolff has the highest overlap rate with LF, including one tie with a baseline author (*book*, but not including *moon*). The binomial probability for 19 out of 22 is 0.0004, or extremely unlikely to happen merely by chance.

Of the 22 keywords, twelve (12) are used by all of the baseline authors (*accident, blood, book, doorway, fist, grin, jean, kiss, moon, teacher, tree, wink*). These keywords are starred in the table above. We can test only these twelve keywords. In 10 of 12 keywords that are used by all the baseline authors, Tracy Wolff has the highest overlap rate or a tied overlap rate with LF. The binomial probability for 10 out of 12 is 0.02, or unlikely to happen merely by chance.

The Binomial Probability analysis using only LF 2016 aligns with the original analysis.

DOCUMENT VECTOR WITH COSINE SIMILARITY

For each of the 22 keywords, not one of the LF*BaselineAuthor vector measurement is similar to the LF*TracyWolff vector measurement. **For each LF*BaselineAuthor, the cosine similarity score is close to zero or negative, demonstrating difference from the LF*TracyWolff overlaps.**

CONCLUSION:

The original analysis included Freeman manuscripts 2010 through 2016 and demonstrated that the lexical overlap between Freeman manuscripts and the Wolff books Crave, Crush, Covet and Court was far too unlikely to have happened merely by chance. The use of the baseline authors showed that the lexical overlap rate was also not due to generic tropes.

In response to opposing counsel's questions, I re-analyzed the Freeman manuscripts.

First, I used Freeman manuscripts 2010-2013. The results are in line with the original analysis, demonstrating that the lexical overlap around 35 keywords between the Freeman manuscripts 2010-2013 and the Wolff books is very high, showing striking similarity, and strikingly different from baseline novels in the same genre.

Second, I used Freeman manuscript 2014. Again, the results are in line with the original analysis, demonstrating that the lexical overlap around 34 keywords between the Freeman manuscript 2014 and the Wolff books is very high, showing striking similarity, and strikingly different from baseline novels in the same genre.

Third, I used Freeman manuscript 2016. Even though the set of 22 keywords is smaller than in the previous analyses, the 22 keywords show that, once again, the results are in line with the original analysis, demonstrating that the lexical overlap between the Freeman manuscript 2016 and the Wolff books is very high, showing striking similarity, and strikingly different from baseline novels in the same genre.

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2024 February 03